



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/735,537	12/14/2000	Alan F. Graves	13552	6554

293 7590 03/11/2004

DOWELL & DOWELL PC
SUITE 309
1215 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VA 22202

EXAMINER

PAYNE, DAVID C

ART UNIT	PAPER NUMBER
----------	--------------

2633

8

DATE MAILED: 03/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/735,537

Applicant(s)

GRAVES ET AL.

Examiner

David C. Payne

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24, 26-61 and 63-71 is/are pending in the application.
- 4a) Of the above claim(s) 25-27, 39, 40, 45, 50-55, 58-60, 70 and 71 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 10-15, 17, 18, 20-23, 61, 63, 65 and 67-69 is/are rejected.
- 7) ☒ Claim(s) 3-7, 16, 19, 64 and 66 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 2633

12/14/2000 Filing Date

DETAILED ACTION

Drawings

1. The drawings are objected to because some elements are represented as blank boxes (e.g., Figure 5 #550) in several figures that are not widely recognized symbols. Applicant is instructed to label the elements with a suitable legend. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. Elected claims 25-27, 39, 40, 45, 50-55, 58-60, 70 and 71 are not examined at this time: in the applicant' s correspondence of 24 December 2003, applicant stated:

" Applicant elects species " A" and further subspecies " 1" related to the frond end, and subspecies " 6" related to the connection verification system. Claims 1-7, 10-27, 39, 40, 45, 50-55, 58-61, and 63-71 read on this election."
3. However claims 24-27, 39, 40, 45, 50-55, 58-60, 70 and 71 are drawn to optical switch matrices/ switching core and a plurality of outputs which are not part of the elected species as shown in Figures 4 and 5, see official office action of 26 January 2003. Therefore only claims 1-7, 10-23, 61, and 63-69 which are drawn to the aforementioned subspecies will be examined at this time.

Art Unit: 2633

Allowable Subject Matter

4. Claims 3-7, 16, 19, 64 and 66 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
6. Claims 1, 2, 11-15, 17, 18, 20-23, 61, 65, and 67-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fatehi et al. US006600581B1 (Fatehi).

Regarding claim(s) 1, 61 and 65, Fatehi disclosed

A system for verifying connections established through a switching unit adapted to receive a plurality

Art Unit: 2633

of input signals and output a plurality of switched signals (e.g., col./line: 2/57-67), comprising: a selection unit for controllably admitting individual ones of the input signals and individual ones of the switched signals (figure 1 #102, e.g., col./line: 8/4-22); and a verification unit (figure 1 #102, e.g., col./line: 8/4-22) connected to the selection unit, for controlling operation of the selection unit as a function of a connection map (figure 1 #103) and performing operations (figure 5, e.g., col./line: 7/50-67) on the signals admitted by the selection unit so as to identify connections established through the switching unit and determine their consistency with the connection map.

Fatehi does not disclose performing relative-delay-dependent signal processing. However, it would have been obvious to one of ordinary skill in the art at the time of invention a relative-delay-dependent signal processing is performed on the Fatehi invention since a time delay is required to perform the operations of checking tag information against a connection map as shown in figure 5.

Regarding claim(s) 15, 20, 21

Fatehi further disclosed a method/system of determining a level of correlation (figure 5 #505, Yes branch) or anti-correlation (figure 5 #505, No branch) between the selected input signal and the switched signal expected to be correlated with the selected input signal; and if the level of correlation is significant or the level of anti-correlation is insignificant, concluding that the connection involving the selected input signal is consistent with the

Art Unit: 2633

connection map (e.g., col./line: 8/10-20).

Regarding claim(s) 22, 23

Fatehi further disclosed

Computer-readable media tangibly embodying a program of instructions executable by a computer to perform a method of validating connections established through a switching unit adapted to receive a plurality of input signals and output a plurality of switched signals (e.g., col./line: 9/10-30, 9/52-67, 10/1-5).

Regarding claim(s) 2

Fatehi further disclosed

a switching core for switching a plurality of input optical signals as a function of a connection map and outputting a plurality of switched optical signals (figure 1 #101)

Regarding claim(s) 11 and 12,

Fatehi further disclosed wherein the selection unit comprises means for causing conversion of the input and switched signals from optical to electrical format and thereby reducing bandwidth (Figure 11 #1140).

Art Unit: 2633

Regarding claim(s) 13, 17

Fatehi further disclosed wherein the selection unit (Figure 1 #150) comprises circuitry for admitting an input signal as a function of an input wavelength and an input port and for admitting a switched signal as a function of a switched wavelength and a switched port (e.g., col./line: 4/28-45).

Regarding claim(s) 14, 18

Fatehi does not disclose wherein the relative-delay-dependent signal processing operations are performed on low-frequency portions of the input signals and switched signals. However, it would have been obvious to one of ordinary skill in the art at the time of invention to perform the switched operation on all portions of the input signals since they are all components of the signal and would naturally be switched with the entire signal.

Regarding claim(s) 67 and 68

Fatehi disclosed there the inputs and outputs are connected to the cross connect map (Figure 1 #103) and the OXC controller (Figure 1 #105).

Regarding claim(s) 69

Art Unit: 2633

Fatehi does not disclose wherein the delay elements are embodied as shift registers. However, it would have been obvious to one of ordinary skill in the art at the time of invention to use shift registers as delay elements since they are commonly used in digital circuits for adding delay to signals to match up signal on long on short paths.

7. Claims 10 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fatehi et al.

US006600581B1 (Fatehi) in view of Kusyk US 6,246,668 B1 (Kusyk).

Regarding claim(s) 10, 63

Fatehi does not disclose disclosed

wherein the selection unit comprises an arrangement of at least one first multiplexer for allowing selection of the one or more input signals and at least one second multiplexer for allowing selection of the one or more switched signals. Kusyk disclosed a multiplexer (Figure 6A, 6B) used in the selection of signals. it would have been obvious to one of ordinary skill in the art at the time of invention to use the Kusyk multiplexer for selecting signals in the Fatehi apparatus since multiplexers are commonly used to feed multiple inputs into a single output.

Conclusion


Art Unit: 2633

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Payne whose telephone number is (703) 306-0004. The examiner can normally be reached on M-F, 7a-4p.

9. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (703) 305-4729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dcp


LESLIE PASCAL
PRIMARY EXAMINER